REMARKS

By this amendment, Applicants have amended the abstract to correct a typographical error and have amended the claims to more clearly define their invention. In particular, claims 2 and 3 have been amended to eliminate the informality and the indefiniteness problems noted by the Examiner in numbered sections 1-4 of the Office Action. Applicants have also added claims 9-13 to define further aspects of the present invention. Claims 9, 10, 12 and 13 are supported by the disclosure at, e.g., page 10, lines 4-17 of Applicants' specification. Claim 11 sets forth the preferred water content deleted from claim 3.

In view of foregoing amendments to claims 2 and 3, reconsideration and withdrawal of the objection to claim 2 and the rejection of claims 2 and 3 under 35 U.S.C. 112, second paragraph are requested.

Claims 1-3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,060,535 to Villar et al. in view of U.S. Patent No. 6,332,920 to Noik et al. Claims 1-3 and 8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Noik et al. in view of Villar et al. Claims 6 and 7 also stand rejected under 35 U.S.C 103(a) as being unpatentable over Noik et al. in view of Villar et al. Applicants traverse this rejection and submit that the presently claimed invention is patentable over the proposed combination of Villar et al. and Noik et al., regardless which of these patents is deemed by the Examiner to be the primary reference.

The presently claimed invention relates to a cementing slurry and to a

method for using the slurry, including cementing a well in an acidic environment. According to the present invention, the slurry includes an aluminous cement, the alumina content of which is at least 30%, microsilica, mineral particles, a hydrosoluble solidifying agent, a retarding agent and water in a quantity of at most 40% with respect to the cement. According to the present invention, microsilica with a granulometry in the range of 0.2 to 20 μm has a percentage of less than 35% by weight with respect to the weight of the cement. Mineral particles with granulometry in the range of 0.5 to 500 μm have a percentage of less than 35% by weight with respect to the cement, and a percentage below the percentage of microsilica. The hydrosoluble fluidifying agent has a percentage in the range of 0.2 to 3% with respect to the weight of the cement. The retarding agent controls the setting time of the slurry.

The patent to Villar et al. concerns a cementing composition for an oil or similar well based on an aluminous hydraulic cement, fine particles, hollow microspheres, water in a quantity such that the porosity is in a range of 25 to 50%, a dispersing agent, a setting accelerator for the aluminous cement and, optionally, other conventional additives. It is disclosed that the composition is useful for cementing conductor pipes in artic zones or in deep-water wells. While the fine particles in Villar et al. can be constituted by microfine silica (microsilica), the Villar patent lists microsilica as only one of many materials that can be used for the fine particles, including ground quartz or glass, finely ground calcium carbonate, carbon black, iron oxide dust, red mud or screened fly ash. See, column 2, lines 53-62 of Villar et al.

At column 3, lines 25 to 40 of Villar et al., a preferred composition is disclosed to use 35 to 65% (by volume) of cenospheres, 20 to 45% aluminous cement and 5 and 25% of fine particles. It appears the Examiner interprets the cenospheres as being equivalent of the mineral particles of the present invention that have a granulometry in the range of 0.5 to 500 μm. However, according to the present invention, the percentage of such mineral particles must remain below the percentage of microsilica. To the contrary, in Villar et al., the percentage of cenospheres is 35 to 65% by volume, while the percentage of fine particles (which may be microsilica) is 5 to 25%. Thus, the Villar et al. patent does not disclose the cementing slurry of the present invention in which the percentage of mineral particles with a granulometry in the range of 0.5 to 500 μm is below the percentage of microsilica with a granulometry in the range of 0.1 to 20 μm. The Villar et al. patent actually teaches away from the presently claimed invention.

Moreover, the cement of Villar et al. appears to have a compressive strength of less than 6000 psi (less than about 41 MPa) as shown in Figure 2. See, also, column 4, lines 31-37. On the other hand, the cement produced by the slurry of the present invention has a compressive strength of at least 90 MPa, preferably at least 100 MPa.

The Noik et al. patent discloses a slag used for cementation of a well, the slag including a hydraulic binder, a microsilica, a mineral addition, a super plasticizing agent and water, under defined granulometry and percentage conditions. However, in Noik et al., the hydraulic binder is constituted by Class G (API) Portland cements, Class H (API) Portland cements and other

hydraulic binders with a small laminate content.

However, the Villar et al. patent teaches away from using Portland cement mixtures and teaches that cements are essentially classified in two types, formulations based on plaster and formulations based on aluminous cements. See, column 1, line 30 et seq. of Villar et al.

Noting the fact that Villar et al. recognizes two classes of cements, Portland cement mixtures and aluminous cements, and teaches the advantages of the aluminous cement composition described therein, while teaching away from Portland cement mixtures, it is submitted one of ordinary skill in the art would not have any reason to use the Portland cement mixture, or components thereof, of Noik et al. in the composition of Villar et al.

Moreover, even beginning with Noik et al., it is submitted one of ordinary skill in the art, reading the Villar et al. disclosure, would not have any reason to modify the slag of Noik et al. based on the composition of Villar et al. In particular, it is submitted that one of ordinary skill in the art would not have used an aluminate cement instead of the Portland cement of Noik et al. since those of ordinary skill in the art would believe that this would lead to a porous structure with too low a setting time for use in an oil well.

For the foregoing reasons, it is submitted the presently claimed is patentable over the proposed combination of Villar et al. in view of Noik et al. and Noik et al. in view of Villar et al.

Claims 4 and 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Noik et al. in view of Villar et al. and further in view of U.S. Patent No. 6,417,268 to Zhang et al. Applicants traverse this rejection and

request reconsideration thereof.

The Examiner has cited the Zhang et al. patent for its teachings in connection with hydrophobically associative polymers. However, it is submitted nothing in Zhang et al. remedies any of the basic deficiencies noted above with respect to Noik et al. and Villar et al. Accordingly, claims 4 and 5 are patentable over the proposed combination of references at least for the reasons noted above.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance of all of the claims now in the application are requested.

Please charge any shortage in the fees due in connection with the filing of this paper, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 612.46069X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

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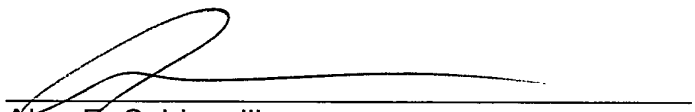

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